## Response to the Examiner's Objections

1. Objection to the drawings

The Examiner objected Figure 1 as incorrectly depicting the invention. Specifically, the Examiner pointed out that said figure did not accurately show the application of monofilament 10, indicating that "[t]he specification specifically teaches that multiple yarns A are twisted together, and then that assembly is wrapped with monofilament 10." The Inventors agree that Figure 1 appears to show the monofilament wrapped around each individual multi filament yarn rather than around the multi filament yarn assembly, as described in the Specification and claimed in the Claims. Figure 1 has now been corrected and a replacement sheet has been provided with this Response. The Inventors respectfully ask the Examiner to accept such replacement. Said replacement aims only to properly depict the described teachings in the Specification and, thus, it does not introduce any new matter. The Inventors thank the Examiner for correctly pointing out their mistake.

2. 35 U.S.C. § 103 Rejections

a. Rejection of Claims 1-3, 6, 7, 11-21, and 25-27 as unpatentable over Ryan (5901632) in view of Briggs (346577)

The Examiner asserts that Ryan teaches a method of manufacturing a rope from different materials comprising heating and stretching, twisting a plurality of yarns to form a yarn assembly, braiding a plurality of the yarn assemblies to form a braided plait, and braiding a plurality of the assemblies to form the rope. The Examiner admits that Ryan fails to teach wrapping the twisted yarn assembly with a wrapping filament, but alleges that Briggs teaches said wrapping. The Examiner concludes that it would have been obvious for the ordinarily skilled artisan, at the time the invention was made, "to utilize a wrapping filament as taught by Briggs in the rope of Ryan, so as to ensure internal integrity in the rope structure." Per the Examiner, it would have been obvious to the ordinarily skilled to wrap the yarn assembly, "so as to maintain the twisted structure, thus preventing unraveling, and consequently prolonging the useful life of the rope." The Inventors respectfully disagree with the Examiner.

Specifically, Briggs teaches to wrap a monofilament around each individual strand (each multifilament yarn in the present invention) and then twist the strands together, to strengthen the strands. See Briggs, column 1, lines 9-19, and Figures 1 and 2. The purpose in Briggs is to strengthen a cord for its use to secure the soles of boots and shoes and to do that, it wraps a monofilament around each strand (individual multi filament yarn) while the present invention applies the monofilament at the multi filament yarn assembly level (i.e., after twisting together a plurality of multi filament yarns) or, in an embodiment claimed in claims not currently under consideration because of the Examiner's request of species selection, traversed by the Inventors, at the braided plait assembly level.

Nothing could have been farther away from the Inventors' minds than strengthening the carrier rope. This type of ropes, used in the drying stage of the papermaking process, has to have limited strength to prevent damage to the machine itself. It could be said that said ropes act as mechanical fuse to prevent damaging the machine.

This is well known in the carrier rope industry, to the point that it is common to insert disclaimers in the marketing literature warning against the use of carrier ropes in applications where rope strength is a desired (and expected) characteristics of the rope, as for example, for lifting weights. For example, the attached Exhibit A, a commercial brochure from a manufacturer of paper carrier ropes, not affiliated with the Inventors, shows the following disclaimer (at page 2, last paragraph):

> Paper Carrier Ropes must not be used for any other purposes. They will not meet minimum standards for other applications, i.e. lifting ropes. Nor responsibility will be taken by LANEX or their agents or distributors, if the rope will be used for other purposes than as a Paper Carrier Rope.

Thus, being the purpose in Briggs to strengthen the cord, and being the strengthening of the rope a consequence to avoid in the manufacturing of paper carrier ropes, Briggs could not have inspired the Inventors, nor could it have suggested to the ordinarily skilled artisan, at the time of the present invention, to combine the monofilament in Briggs with the rope in Ryan. To the contrary, Briggs teaches away from the present invention.

The Inventors' objectives, dual in nature, are clearly enunciated in the Specification. First, the Inventors intend "to provide a carrier rope with an improved gripping surface for carrying along and transporting paper webs through paper machine systems." See, Specification, Summary, page 3, fifth paragraph. This purpose is further highlighted by the Inventors' citation of U.S. Patent No. 5,934,168 that teaches a rope with improved effectiveness in gripping paper webs through raised portions over the rope circumference made by using "different multiple thread counts in the different running directions and/or ... twisted laid fiber elements and/or ... fibers with profiled cross-sections and/or textured crimp fiber yarns."

The Inventors' second objective is stated in the Application, page 1, third paragraph:

> While the primary function of the carrier rope [is] to grip a paper web and carry it along through the paper machine, a constant obstacle for the paper industry is improving the abrasion resistance of a carrier rope while maintaining effective grip properties of the rope. (Emphasis added).

It is for this dual purpose, improving the abrasion resistance and the gripping properties of the rope, that the monofilament is added, not to strengthen the individual multi filament yarns, and thus the rope. In short, the Inventors sought and successfully obtained a "gripping shield" to improve those properties of the rope. But Briggs teaches away from using monofilaments to increase abrasion resistance and gripping properties,

since the monofilaments in Briggs aim to strengthen the cord, an undesirable characteristics for paper carrier ropes.

In conclusion, the Inventors submit that Claims 1-3, 6, 7, 11-21, and 25-27 cannot be considered obvious in view of Briggs, because this patent teaches away from the invention claimed in the mentioned claims. Consequently, the Inventors respectfully request the Examiner to withdraw the rejection of said claims.

b. Rejection of Claims 9, 10, and 29-32 as unpatentable over Ryan in view of Briggs, as applied above to Claims 1-3, 6, 7, 11-21, and 25-27, and further in view of Eisler (U.S. Patent no. 3,960,050)

The Examiner asserts that the combination of Ryan in view of Briggs teaches the rejected claims except for the application of a polyurethane coating via a dip bath, which Eisler teaches. Per the Examiner, "[i]t would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a polyurethane bath as taught by Eisler, so as to strengthen the rope components, from both external stresses, and internal friction." The Inventors respectfully disagrees with the Examiner.

Their Inventors reasserts herein their arguments discussed above regarding the inapplicability of Briggs and submit that Claims 9, 10, and 29-32 cannot be considered obvious in view of Briggs, because this patent teaches away from the invention claimed in said claims. Furthermore, the Inventors assert that Eisler also teaches away from the invention as claimed in Claims 9, 10, and 29-32. Specifically, the purpose of the application of a polyurethane coating is neither to strengthen the rope components nor to reduce external stresses. The Inventors have already abundantly discussed that a teaching of strengthening the cord teaches away from the invention. Furthermore, as improving the gripping of the paper web (i.e., increasing friction) is one of the desired objective of the present invention, any teachings to reduce the external friction will teach away from the invention.

As stated in the Application, page 11, line 1-4, the polyurethane protective coating is to provide abrasion resistance to the rope, but this objective should be obtained without decreasing the gripping effectiveness (i.e., the friction with the paper web) or increasing the strength of the rope. Thus, Eisler, a patent teaching ropes for use as "stay wires for towers and inflatable or rigid construction, as cables for holding captive balloons, for suspending or towing gear lowered deep into the ground or the sea, or for towing, making fast or anchoring floating objects," (See Eisler, column 1, lines 15-19), could not have inspired a method to manufacture the opposite type of rope, a "non-lifting rope," a carrier rope of limited strength that should effectively grip the paper web (i.e., where there should be gripping friction between the rope and the web.) Nor could have the ordinarily skilled artisan combined the teachings of Eisler to those in Ryan and Briggs to obtain the present invention. To the contrary, Eisler teaches away from the invention.

In conclusion, the Inventors submit that Claims 9, 10, and 29-32 cannot be considered obvious in view of Briggs and in further view of Eisler, because these patents

teach away from the invention claimed in the mentioned claims. Consequently, the Inventors respectfully request the Examiner to withdraw the rejection of said claims.

c. Rejection of Claims 22, 23, and 28 as unpatentable over Ryan in view of Briggs as applied above to Claims 1-3, 6, 7, 11-21, and 25-27, and further in view of Foote (U.S. Patent No. 4,321,854)

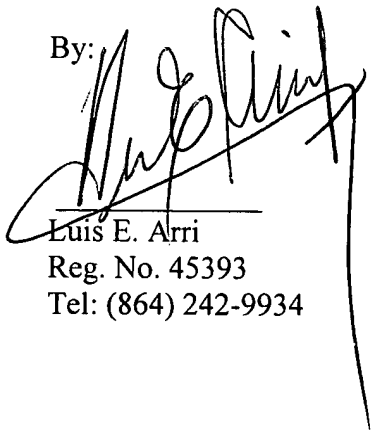
The Examiner asserts that the combination of Ryan in view of Briggs teaches the rejected claims except for the application of a core, which Foote teaches. Per the Examiner, "[i]t would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a core as taught by Foote, so as to increase the tensile strength in the rope." The Inventors respectfully disagrees with the Examiner.

Their Inventors reasserts herein their above discussed argument and submit that Claims 22, 23, and 28 cannot be considered obvious in view of Briggs, because this patent teaches away from the invention claimed in said claims. Furthermore, the Inventors assert that also Foote teaches away from the invention as claimed in Claims 22, 23, and 28. Specifically, it is not the purpose of the present invention to increase the tensile strength of the rope. To the contrary, The purpose is to improve gripping by giving "body" to the rope, i.e., to increase the gripping surface. Again, a patent that teaches a method to strengthen the rope teaches away from the present invention.

In conclusion, the Inventors submit that Claims 22, 23, and 28 cannot be considered obvious in view of Briggs and in further view of Eisler, because these patents teach away from the invention claimed in the mentioned claims. Consequently, the Inventors respectfully request the Examiner to withdraw the rejection of said claims.

To expedite the prosecution of this Application, the undersigned attorney respectfully request the Examiner to call him to the telephone number below should the Examiner have any additional questions.

Respectfully yours,
THE LAW OFFICES OF
JAMES STONE CRAVEN, LLC

By: 

Luis E. Arri
Reg. No. 45393
Tel: (864) 242-9934